Increasing the Competency of Farmers and land users a Critical Future Force for Agricultural development and Natural Resources
Isfahan, Iran

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Abstract
According to various studies, agricultural development in Iran has yet not had any convincible evolution. Consequently, more than 50% of total available land, water, and natural resources have still not been cultivated. On the other hand farmers and land users have not treated friendly and appropriately with these valuable natural resources as expected. Several statistical reports have already stressed this fact. Consequently, a large part of pastures and grasslands has been lost their productivity and potentiality because of overusing and inappropriate exploitation. Hence, a number of researchers believe that the difficulties within Iranian agriculture have resulted from inefficient resource use by human resources within the sector, rather than a resource squeeze from agriculture. Therefore, more consideration to human resources in agricultural sector is inevitable. Since farmers and land users are the main factors of active human resources in the agricultural sector, increasing their competency and skills directly influence efficiency and productivity of agriculture and natural resources. Therefore in this contribution attention is being paid to the changes that farmers and land users have been experiencing from last decade till now. Likewise, coping strategies they have applied to overcome these changes and their competency situation are considered and discussed. What competencies they do have, what they should posses and the extent to which they need to be equipped with these necessary competencies. Finally, recommendations are also presented and discussed.

Key words: Agriculture, Competency, Development, Farmers, Land users, Natural resources.

Introduction
According to various studies, agricultural development in Iran has yet not had any convincible evolution. Consequently, more than 50% of total available land, water, and natural resources have still not been cultivated. In detail, just 37% of all cultivable lands in the country, and also only 58% of all acquirable water, have been utilized by now (Tahmasebi, 1998). On the other hand, evidences show that farmers and land users have not treated friendly and appropriately with available natural resources as expected. For instance, about 30% of jungles located in north of Iran have been destroyed and deforested during last two decades! Furthermore, a large part of pastures and grasslands has been lost their productivity and potentiality because of overusing by nomads’ and farmers’ chattels (Darvishi, 2003)! Karshenas (1994) contended that the difficulties within Iranian agriculture have resulted from inefficient resource use by human resources within the sector, rather than a resource squeeze from agriculture. Hence, more consideration to human resources in agricultural sector is inevitable. Since farmers and land users are the main part of active human resources in the agricultural sector, increasing their competency and capability directly influence efficiency and productivity of agriculture and natural resources.
This is particularly, more critical and unavoidable in the near future if Iranian farmers are going to bear with intensive competition, which is unbelievably increasing in all over the world. Therefore, agriculture extension services are expected to expedite this procedure by accommodating and equipping farmers with update and essential competencies. In this research Isfahan has been selected, as the second biggest province of Iran and an apropos sample of farmers in the most area of Iran. Attention is paid to the changes they have already faced with, the methods they have used to cope with these continuous changes, competencies they have, and the competencies that they should possess to overcome the upcoming needs, demands and roles in the future. Finally, recommendations are also presented and discussed.

**Purposes and objectives**
The main purpose of this study is to design the general competency profile for target group as a sample of Isfahanian farmers, currently and towards next 3-5 years. To do this, three following research questions are propounded:

1. What kind of changes has been happened in farmers’ situation from last decade up to now?
2. How have they been able to cope themselves with aforementioned changes?
3. What competencies do they have and what competencies should be reinforced or created?

**Methods and data sources**
The study is based on both literature review and field inquiry. A comprehensive Internet and library search plus using questionnaire among the sample of farmers in two important townships of Isfahan province was utilized. Since the majority of farmers are not appropriately educated, they were asked to answer the questions personally by researcher. Totally 27 farmers from different levels were interviewed within March 2004 till April 2004 and because of limited number of respondents the results were analyzed in a qualified research approach. It is supposed that this research is complemented with another study by using a larger number of respondents afterwards. At this stage, the researcher draws an outlook of the problem and explores relevant information and data. To reach this goal, open questionnaire was utilized, and sufficient time was given to the farmers for more discussion, brain storming and expressing their point of views very freely.

**Results**
In general following issues can be stated as the most important results of the field study:

**Changes have been happened in farmers’ situation from last decade till now**

1. The majority of farmers interviewed (about 80%) highlighted that generally there have not been a significant change in different aspects of their farming in terms of technical affairs. They also cited that one of the negative changes has been occurred is ascending rate of the prices of agricultural inputs the year after year and oppositely decreasing rate of profitability and value of agricultural products. Although a limited extent of this phenomenon is normal but this unbalanced situation that caused by high inflation in the country is not manageable by farmers. The government has been tried to alleviate this unstable economic issue but various affecting factors are still not under control by the government.
2. There was also a matter of environmental changes and very detrimental dryness in last couple of years. This unexpected negative weather has also had a preventing influence on farmers’ and natural resources users’ activities. According to farmers’ words, the Ministry of Agriculture has taken into account this unexpected occurrence but still has not been able to support the majority of farmers financially during this severe period. As a result, many small farmers who were more vulnerable, couldn’t bear this duration and were completely demoralized and impoverished.

3. Nearly all respondents unanimously believed that the qualification of various inputs such as pesticides, seeds, and fertilizers have had significantly diminished. In contrast, the price of all different sorts of inputs has remarkably raised. In their opinion, extension services centers that are expected to deliver necessary inputs with cheaper and reasonable governmental prices have not the sufficient quantity of these inputs available to cover farmers’ requirements and demands.

4. As to the application of new technology and mechanization in farming, a grate number of respondents (75%) believed that there is not a promising movement toward using new technological farming systems at least for the majority of farmers. The Ministry of Agriculture has not supported farmers appropriately by delivering long-term loans, subsidies, and so on. Instead, the Ministry has mainly concentrated on a number of selected new technologies in agriculture as new extension innovations for a limited number of farmers via contracts as well as “under-pressure irrigation method.” The results support karami’s study when he showed the extension organizations are mostly concentrating their efforts on villages where farms are larger and more developed and to some extent are neared to the rural services centers. Although supporting farmers who owned larger farms, with higher production and income, has had a remarkable positive effect on productivity and agricultural progress but the fruits of this progress are not shred by all and many remained in poverty. Therefore, it will have undesirable influence in sustainability of agriculture and capability of a large number of farmers to cope with new challenges and problems (Karami, 1993, 2001).

5. In farmers’ attitude, there has not any noticeable change in extension services and education practically. Although some routine extension programs have been implementing by extension services centers, respondents mentioned that these instructional services are established rarely and naturally are not sufficiently effective. This issue also infers from Moczarski’s survey, which highlighted this fact that many extension programs do not appropriately fulfil their original expectations. To ensure genuine co-operation in extension program in developing countries like Iran, farmers should be actively involved in the initial planning procedures as well as in the execution. They themselves should be encouraged to act, in effect, as extension workers in their communities (Moczarski, 1978). Diversely, the majority of respondents in the research were not involved in extension programs and directly in continuous contact with extension personnel.

6. In marketing affairs, the large number of farmers (85%) claimed that the situation has not been positively, changing. As evidence, they contended that they have to sell their products with a very cheap price to big dealers and other beneficiaries every year. Therefore, the cupidity of intermediaries has caused on one-hand very low benefits and some times loss for farmers and high prices in public retailing sector on the other hand. This issue was perceived
as the most important concern for farmers. So it’s expected that the Ministry of agriculture takes into account this point and tries to find reasonable and feasible approaches to solve this aggressive factor that is negatively affecting farmers’ life style.

The methods that farmers and land users could cope themselves with aforesaid changes
In response to this question, farmers mostly (65%) said that they had to trust themselves (trial and error) and also their friend’s help informally. And the minority (25%) of them considered extension services as an important and efficacious role. Additionally private and independent companies have supported a very limited number of selected farmers (10%) who have own the quite big farms and high revenue.

Moreover, due to the low educational level of farmers and also low access to new agricultural written information and documents, they have used relevant books, articles, and journals very seldom. Likewise, statistics unquestionably emphasize this point too. They reveal the fact that about 40% of farmers’ population have more than 50 years old and more than 60% of them are still uneducated! With regard to this situation, naturally agricultural development in Iran is experiencing severe and hard instants at the moment (Tahmasebi, 1998). Bageri and Shahbazi (2003) supported this result in their study as well. They uncovered that a large number of rural young farmers have to learn new competencies just by themselves and their personal experiences in the farms. They also disclosed that there is a significant relationship between the rate of farmers, contacts with information sources, their ages, and participation in agricultural activities and their competencies.

This phenomenon was additionally reiterated in a very specific consultant committee, which is composed of 17 Iranian and 15 international consultants and has been established by the Ministry of agriculture recently. Emadi the deputy of Jahad-e-Keshavarzi (Agriculture) Ministry who is one of the members of this committee proclaimed that less than 5% of all employees in the Ministry has direct and personal contact with farmers. Due to this critical issue, many barriers in the process of delivering new information, skills and competencies to the farmers and land users have inevitably been generated (Lotfi, 2004).

The competencies that farmers already have and those that should be reinforced or created
As to farmers’ competencies, two methods were used. Firstly, sufficient time was given to them for expressing their farming style, difficulties, capabilities, and problems. To facilitate this assessment process, a number of small group discussion sessions were established as well. Furthermore, researcher had an explicit attention on their farms and life style upon meetings personally. In brief, two kinds of competencies were distinguished: technical and general. These competencies are discussed as follow:

Technical competencies: The vast majority of farmers (75%) merely followed traditional and local skills that they have been learnt via their friends and fathers informally over the years and naturally these competencies are not adjustable with new changes in agriculture and increasing expectations. This problem can be easily seen in all aspects of farming activities such as planting, irrigation, plant protection, harvesting etc. As a main reason for lacking these technical capabilities, previous findings revealed that there is not a strong communication between researchers and farmers. Therefore the majority of implemented agricultural researches have not been either noticeably gainful for farmers’ real situation or applicable by them because of low level of farmers’ technical competency (Karami-Dehkordi & Pezeshki-Raad, 1997).
Consequently they have not had optimum and reasonable production level and naturally desirable income.

A study, which was done in Fars province (southeast) of Iran, supports this idea too. This survey discovered that existing technical change approach to research and extension is not efficient way to obtain a through of farming systems, particularly that a predominant class of small farmers. The researchers suggested more adjustable and flexible extension and research programs to improve the understanding of complex farming systems and effectiveness of relevant activities (Karami & Torkamani, 1992).

Relatively, another research, which was recently accomplished among the rural youth in Iran, clearly shows that the target farmers has had lack of technical competencies in all stages of farming activities (planting, harvesting, plant protection, using the agricultural machinery and so on). According to the results of that research, from 75 till 82 percent of young farmers need to be taught and equipped in all aforesaid aspects of farming (Bageri & Shahbazi, 2003).

**General competencies:** Since a large number of farmers and land users who were interviewed were low educated or even uneducated, subsequently they also lack a few of general competencies, which are so important in both farming and their life as a whole. These competencies can be stressed as communication skills, management, leadership, research skills, co-operation or group working skills, and program planning capability. The results of open questions during small group meetings clearly showed that about 90% of respondents were weakly equipped with aforementioned characteristics and abilities as the most critical necessary common competencies. Nevertheless, there were a very small number (about 10%) of respondents who owned suitable situation in terms of general competencies and they even had responsibilities in rural councils and other participatory and voluntary assembles and councils.

The results are in congruence with an assessment on farmers’ information, which was done in southeastern of Iran (Azarbayejran province). This research revealed that the majority of farmers had low information input score. To explain the factors causing this low level of information input, the researcher explored that there is a significant relationship between all independent variables of the research. These variables were information out put, inter-system communication, farmer-researcher communication, family education statues, and availability of input facilities (Rezvanfar & Vaisy, 2003). As it could be seen the majority of these variables originates from lack of required general competencies.

**Conclusion and recommendations**
With a glance on mentioned results of this study it could be realized that farmers and natural resource users have struggling with various severe events and changes over last years. Unfortunately the Ministry of Agriculture has not been able to support them expectedly because of different internal and external barriers. According to the authorities of the ministry of agriculture, two important reasons are insufficient fund allocated to the Ministry each year and also huge number of small farmers and land users (Lotfi, 2004). This issue has resulted in so many unwanted obstacles in farming activities and appropriately dealing with natural resources and environment.

Consequently, Iranian farmers are not properly equipped with professional competencies to empower themselves and generate more products, earn convincible income and also bring about sustainable agricultural development and natural resources. Thus, official and private agricultural
extension institutes should mainly concentrate on this crucial aspect instead of paying merely attention to traditional extension and education methods and exclusively delivering infeasible, theoretical, and irregular information to the farmers. To do so, following recommendations are suggested:

- The Ministry of Agriculture should provide sufficient amount of essential agricultural inputs for farmers and stabilize their prices. Also there should be an explicit control and supervision by the Ministry on prices of agricultural products in the market. So, in this way, farmers will be helped to buy qualified inputs with reasonable prices and earn more benefits out of their products. Miserably, at the moment, farmers are just hard-workers and dishonestly input suppliers and products’ dealers are acquiring huge money out of their labor very easily and without any effort!

- It is expected that the Ministry of agriculture allocate more funds to help farmers financially by offering long-terms loans and debts. Because in the current situation agricultural banks are paying little money via short-term contracts to the farmers that is not satisfactory and sufficient. Additionally, it’s hard for farmers to return this money on time.

- There is a crucial need for generalization of extension services among a large number of farmers and natural resource users via utilizing little but efficacious and sustainable extension plans instead of focusing on few selected farmers and following merely centralized expensive extension projects.

- Many efforts have been done to eliminate discrimination between small and big farmers and land users; Nonetheless, there is still visible partiality among different farmers and land users in terms of support and availability of inputs and extension services. Thus, it could be suggested that the Ministry of agriculture and especially extension organizations try to support all farmers, particularly small farmers to cope with miscellaneous ongoing changing in their farming systems.

- Finally, since there is a lack of a number of technical and general competencies among the farmers and land users (introduced in the last part of this contribution), it is recommended that extension instruction and other rural educational services preferably concentrate on these critical competencies. This should be conducted from the perspective of organizational (farm or agri-business) and individual (farmer, entrepreneur or employee) performance, since competence development only makes sense if this performance improvement perspective is used (Mulder, 2004). Likewise, structural revision in preparation and planning of various courses is needed to make them more effective, qualified, and competence-oriented. And more importantly steady and proper support should be made later on to let competent farmers and land users applied their new competencies for better performance and production.

References


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